

Piedmont triad freight study

GUAMPO August 26, 2015



Burlington-Graham Metropolitan Planning Organization

BGMPO

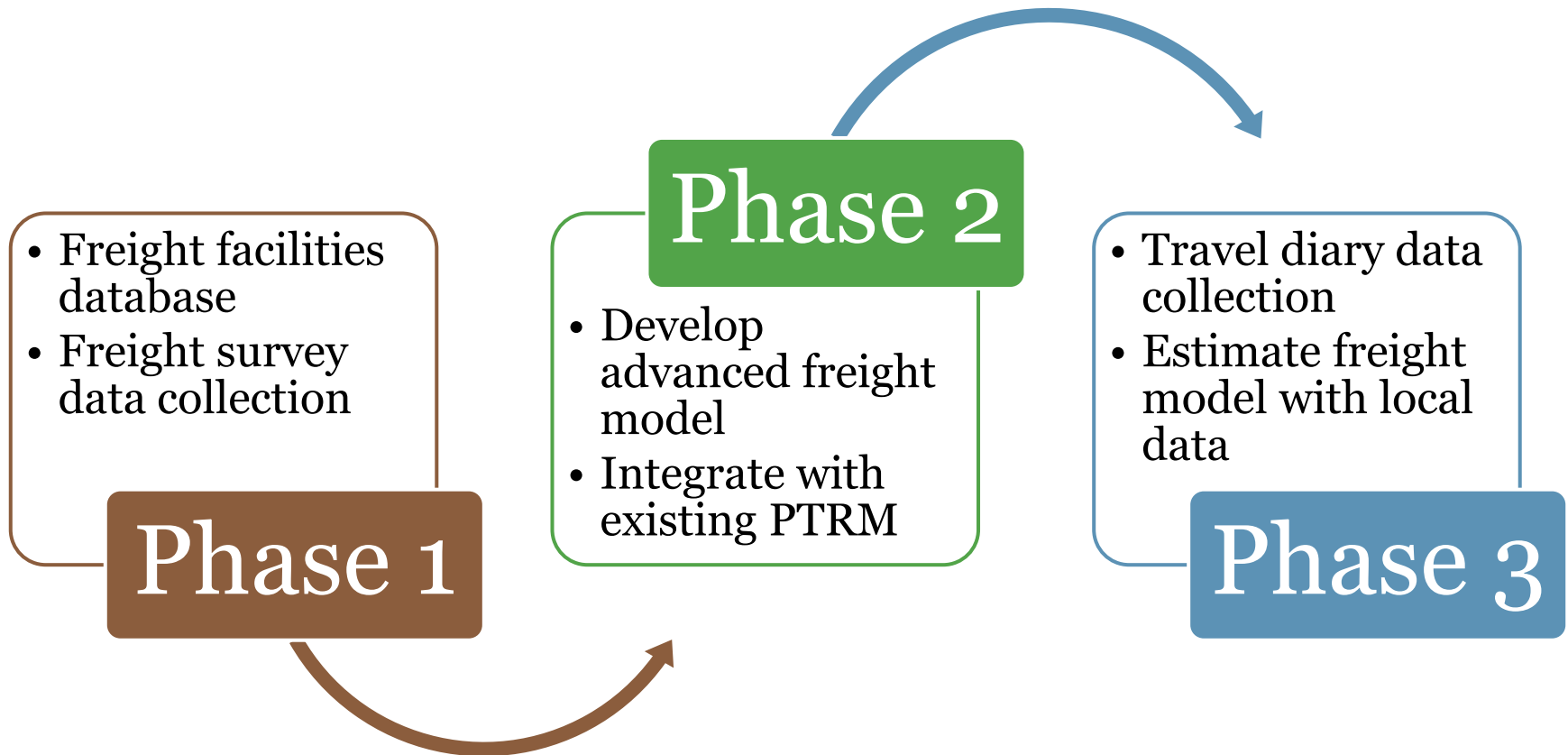


**PARSONS
BRINCKERHOFF**



North Carolina
Center For Global Logistics

Piedmont Triad Freight Study



SHRP2 C20

- Competitive grant process
- Freight Demand Modeling and Data Improvement
- Road map for improved freight data sets and freight modeling practices
- Triad will receive national recognition this effort and will lay the groundwork for helping others

Take Home Message

What we have

**Freight
focused
information
system**

Big picture benefit

Used to inform land use planning, transportation planning, and project prioritization

Specific applications

- Investigate freight clusters
- Estimate truck trips
- Project prioritization
- Inform land use and rezoning decisions
- Identify characteristics supporting freight clusters

What comes next

- Policy scenario analysis
- Mode choice
- Understanding of dynamics between congestion and freight
- Impacts of land use decisions

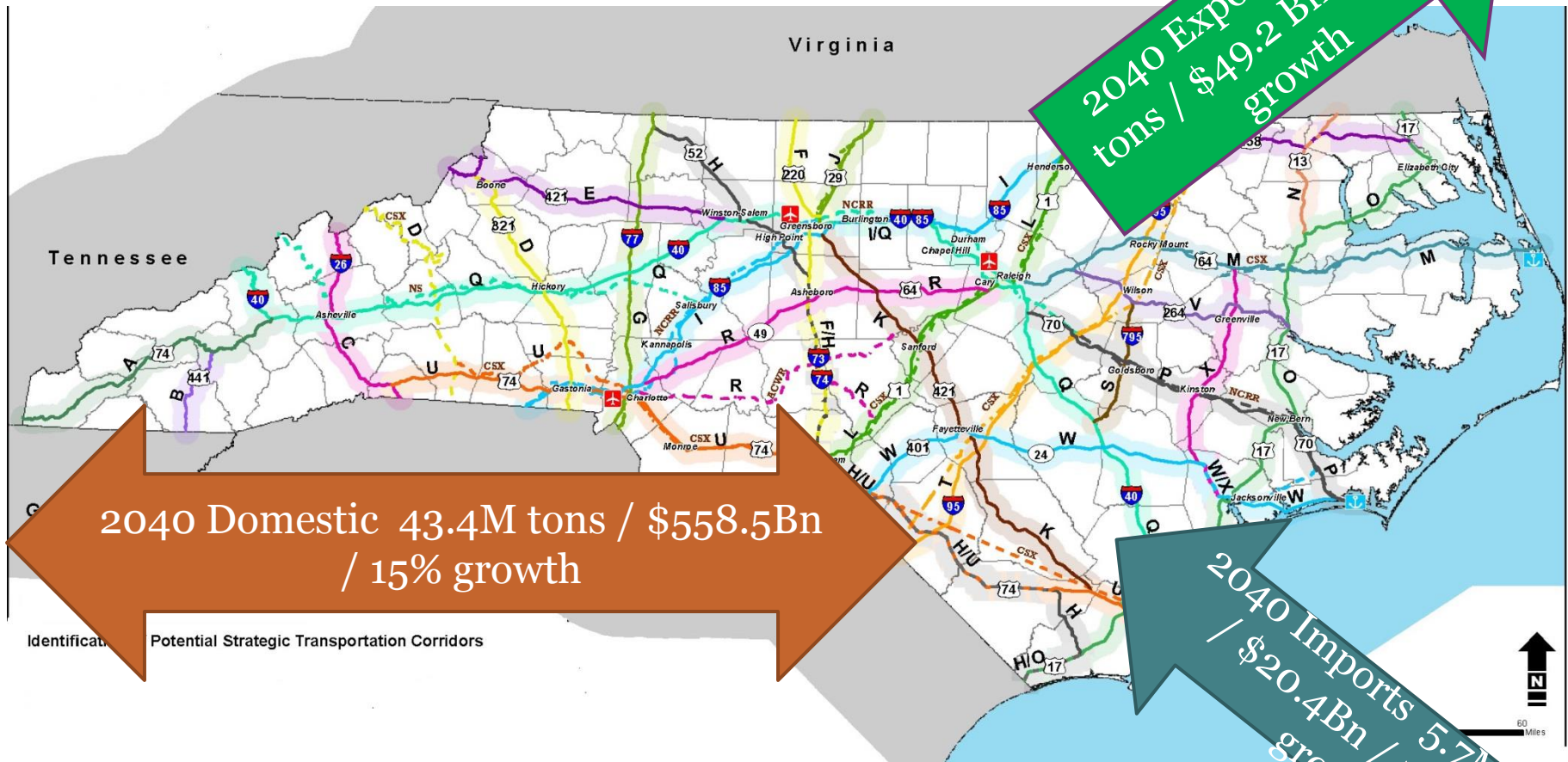
Background

Freight in North Carolina and the Triad

Freight and the Triad

- Goods movement and the economy
- Considering Freight in Transportation Planning
- Role of Freight in the Triad
 - One of the worlds largest transportation and logistics clusters
 - Region is growing through diversification
 - I-85/I-40 gateway to major hubs in the north and south
 - Some of the highest truck flows in North Carolina
- Region is taking bold steps to understand freight and logistics

NC Freight Flows



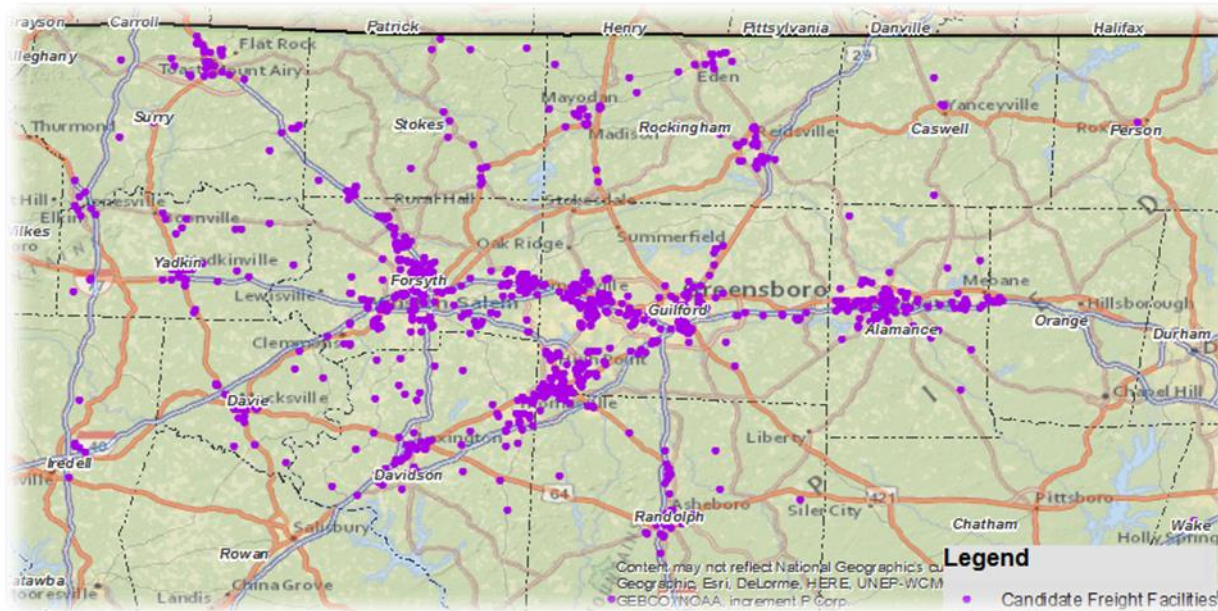
Piedmont Together

- **Goal 1: More transportation choices through the development of safe, reliable and economical transportation infrastructure and services**
 - Objective 1 Establish an enhance a robust network of multimodal transportation choices at the statewide, regional, county and municipal
 - Objective 2 Conduct local research and education on the benefits of a multimodal regional network.
- **Goal 2: Maintain and enhance the region's competitive edge as a freight transportation and logistics hub on the Eastern Seaboard**
 - Objective 1 Develop a comprehensive vision for freight infrastructure in the region.
 - Objective 2 Develop a multimodal freight network strategy in the region designed to create, protect and maintain transport links, connecting intermodal facilities and appropriate modes, both public and private.
 - Objective 3 Maintain a low level of traffic congestion in the region along Unlimited Truck Routes.
 - Objective 4 Expand logistics education and career opportunities for the Piedmont Triad workforce.

Data Collection

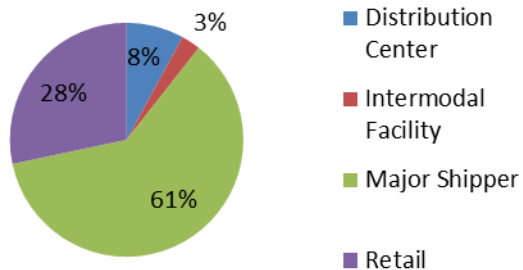
Freight Facilities Database

- 968 Facilities classified by type
 - Distribution center, intermodal facility, major shipper, retail
- Basic information available for most facilities
 - NAICS classification code, number of truck bays, primary commodity

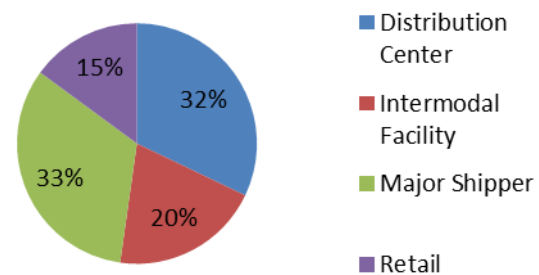


Freight Facilities By MPO

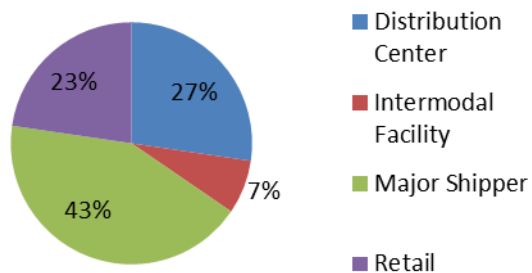
BGMPO



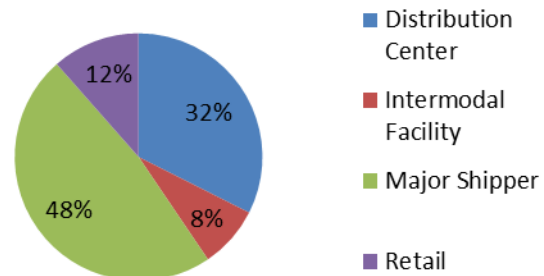
GMPO



WSMPO

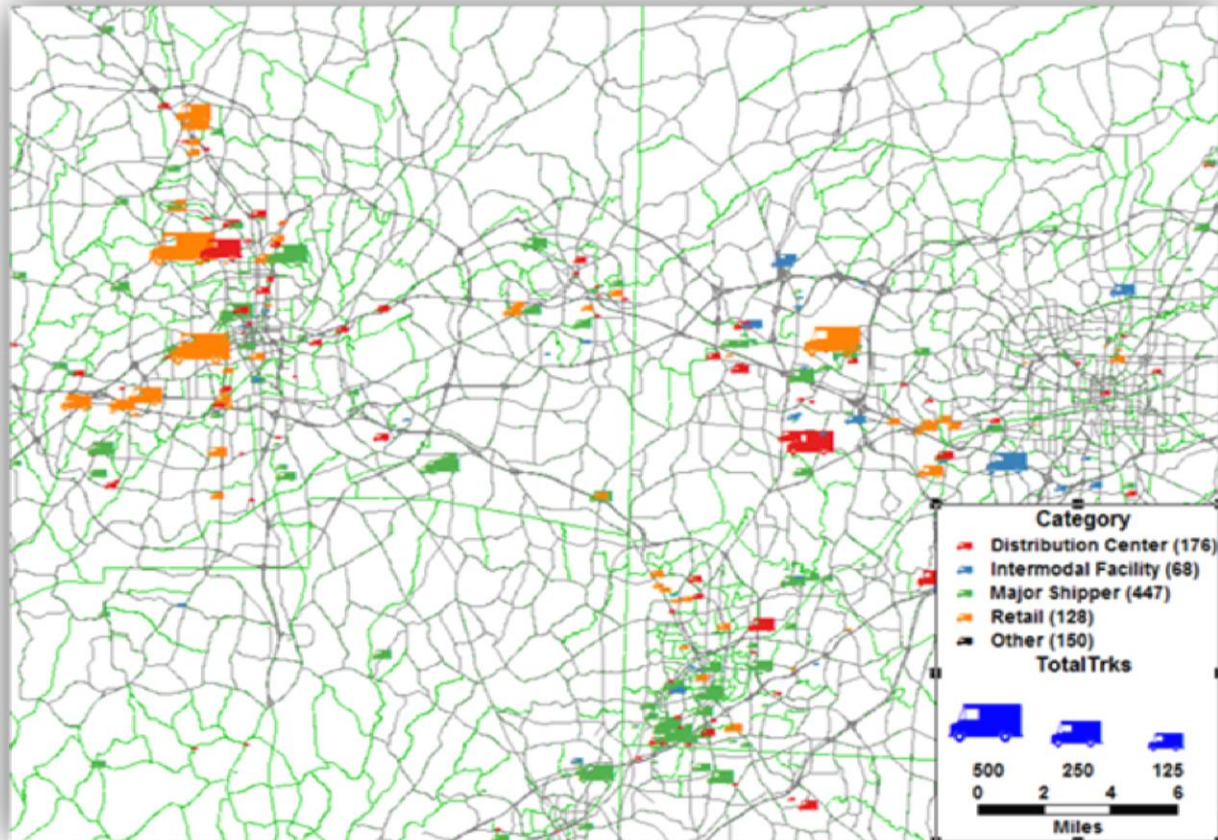


HPMPO



Database Benefits

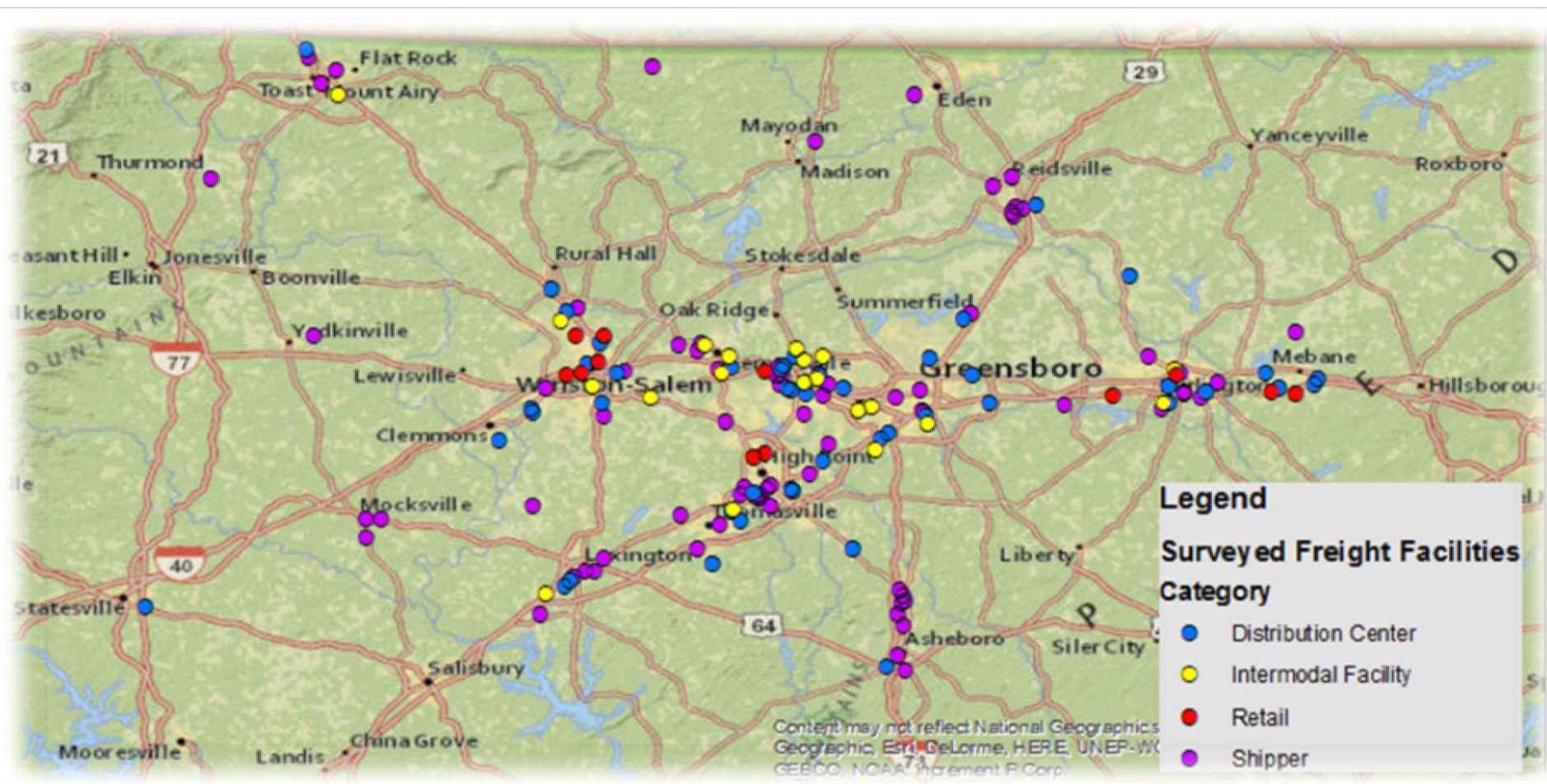
Freight facilities by category
scaled by estimated Truck trips



Freight Survey Data Collection

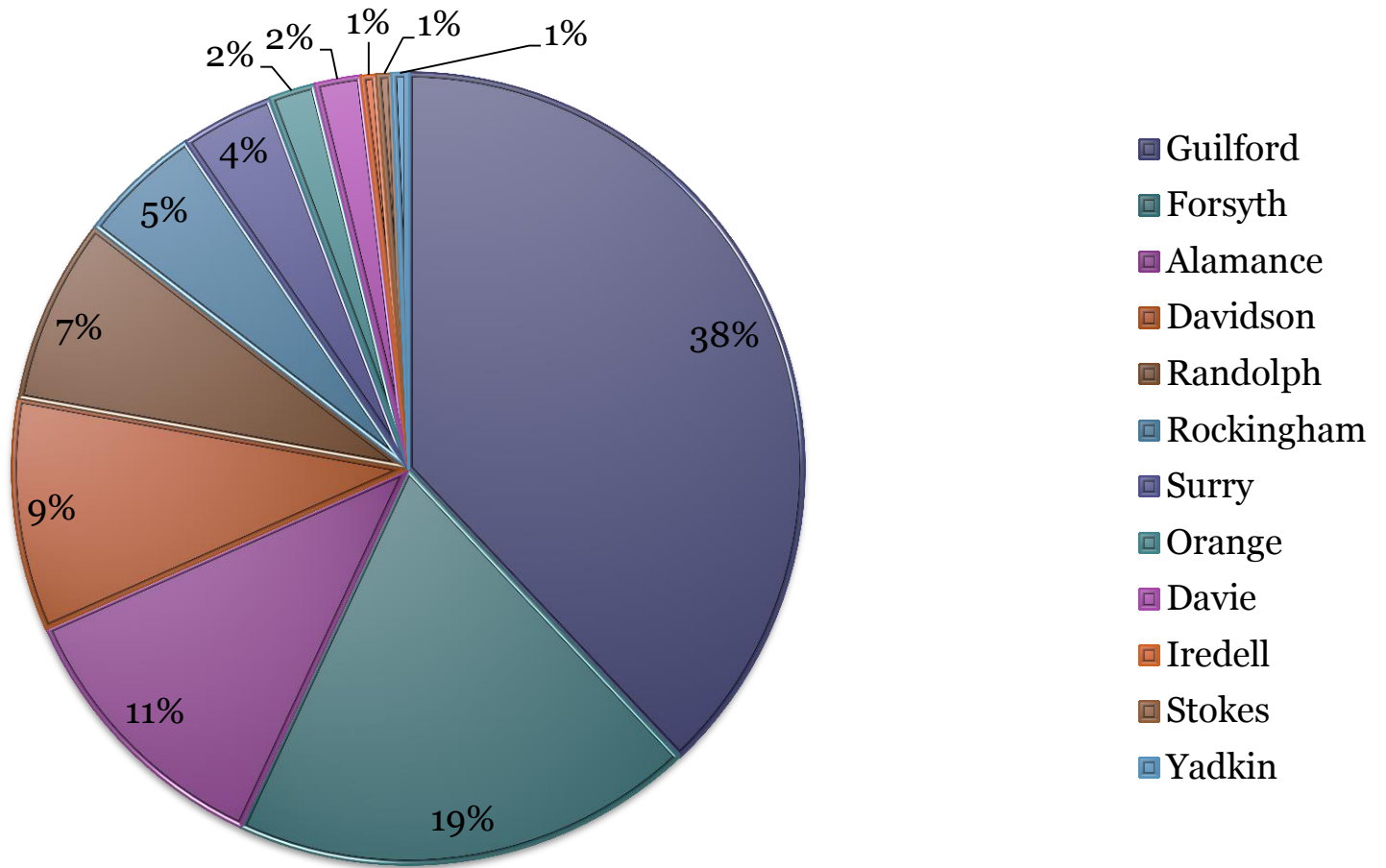
Survey Results

Over 800 Facilities visited, survey data for 158



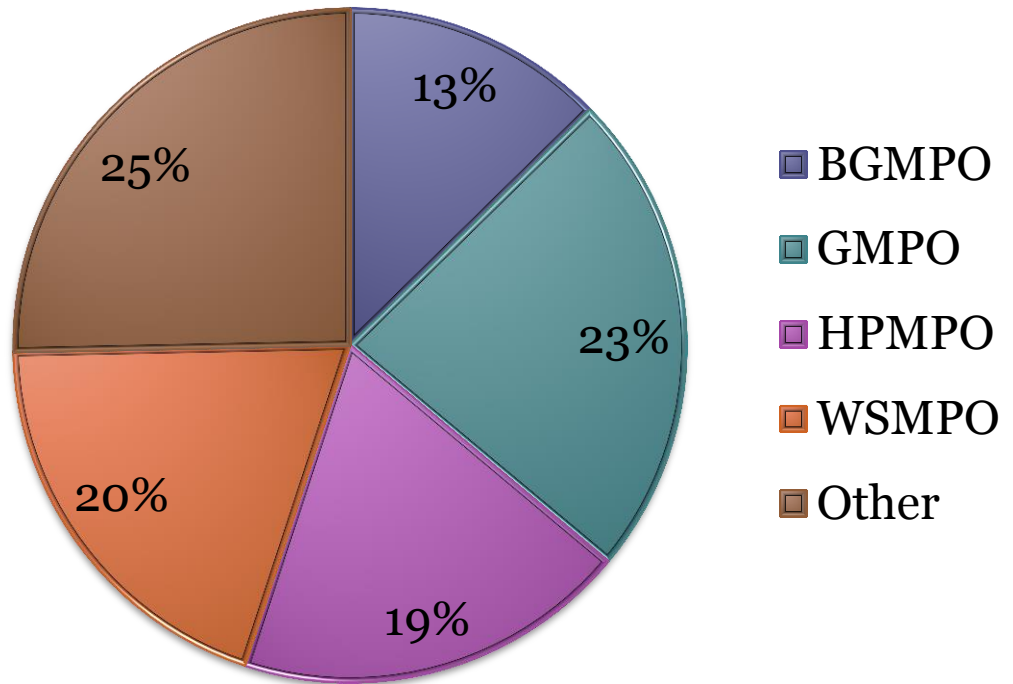
Example Data Record

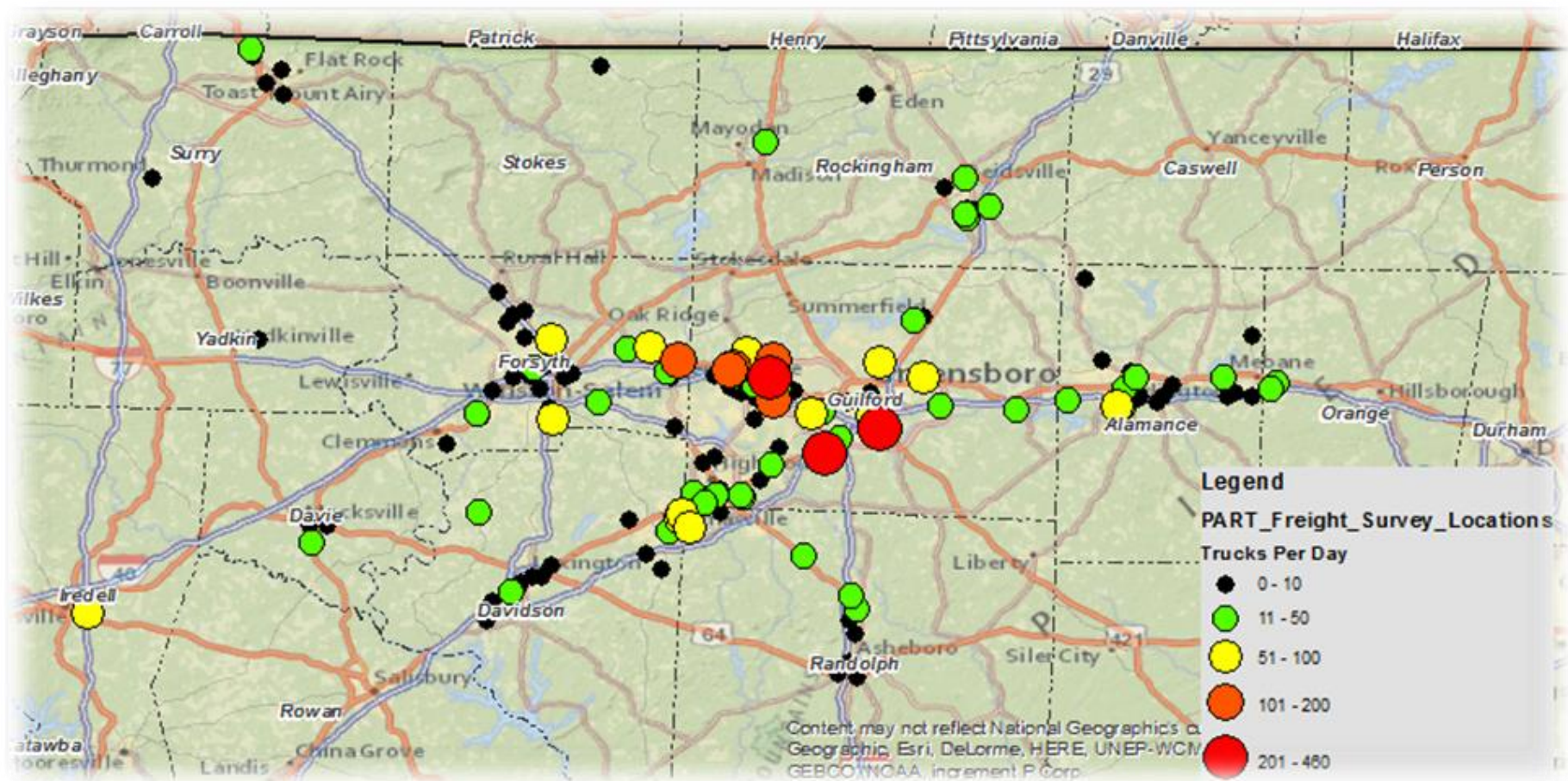
RecordID	2775
County	Iredell
Type	Warehouse
Category	Distribution Cen
PTRM_NAICS_Group	Retail
FT_Empl	75
Bldg_SF	24000
TrkBays	0
IB_Comm1	Scrap metal
IB_Comm2	
IB_Comm3	
OB_Comm	Prcessed scrap metal
DailyTrk	80
Cntainer	20.00%
Conv5axl	50.00%
SingUnit	5.00%
Del_Vans	20.00%
OtherTrk	5.00%



Distribution of
Surveys by County

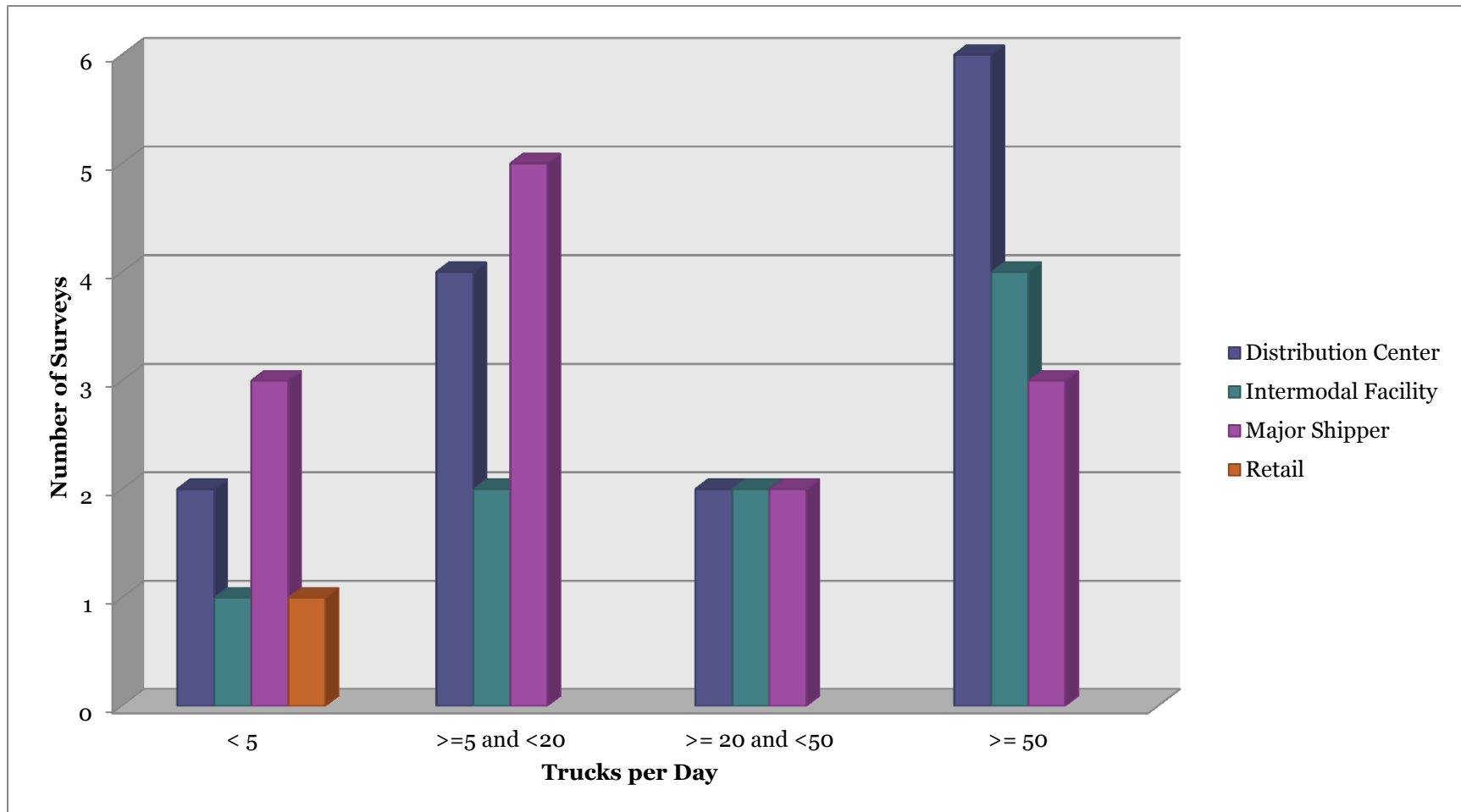
Distribution of Surveys by MPO



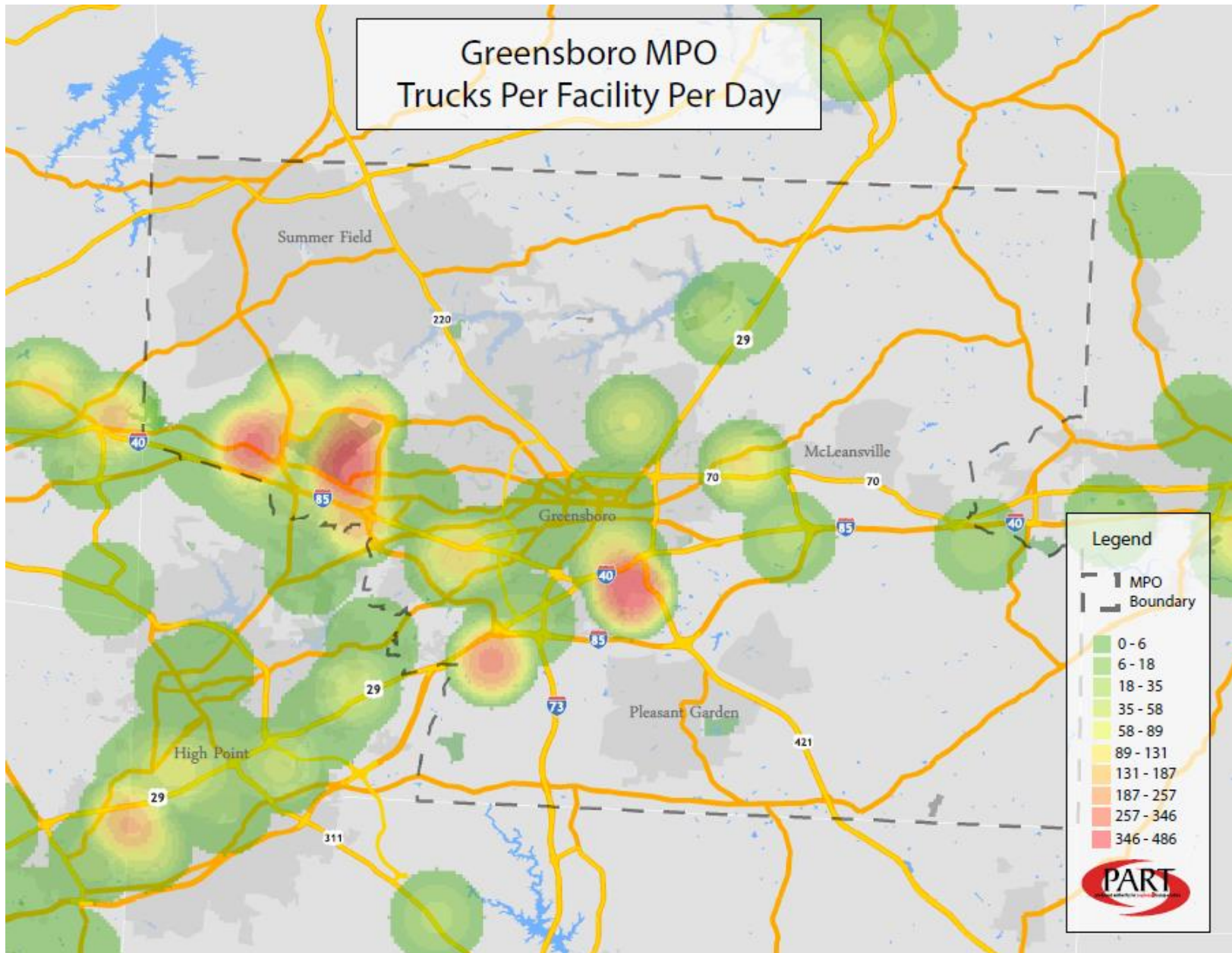


Survey Results - GUAMPO

Distribution by Type and Trucks per Day

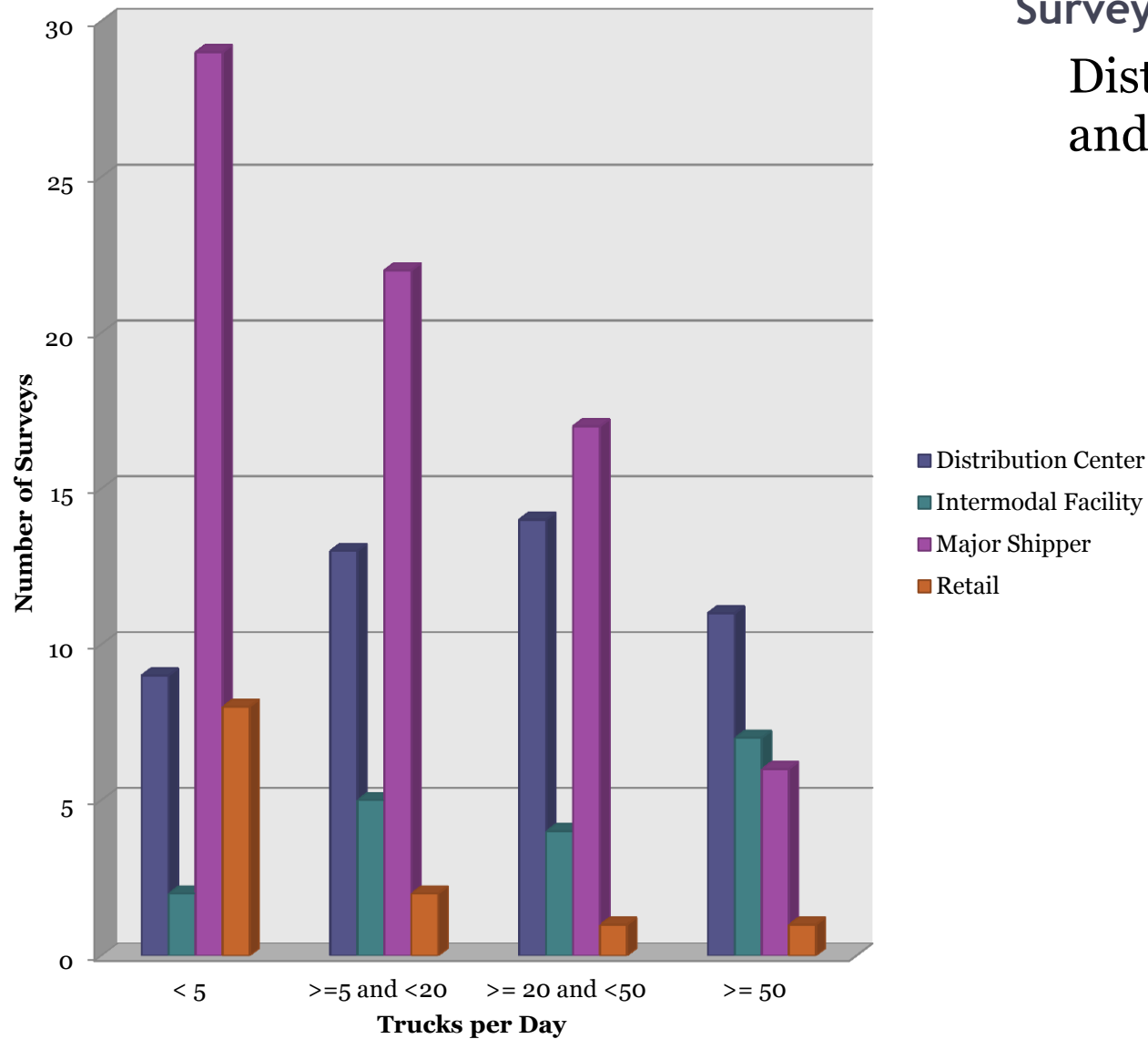


Greensboro MPO Trucks Per Facility Per Day



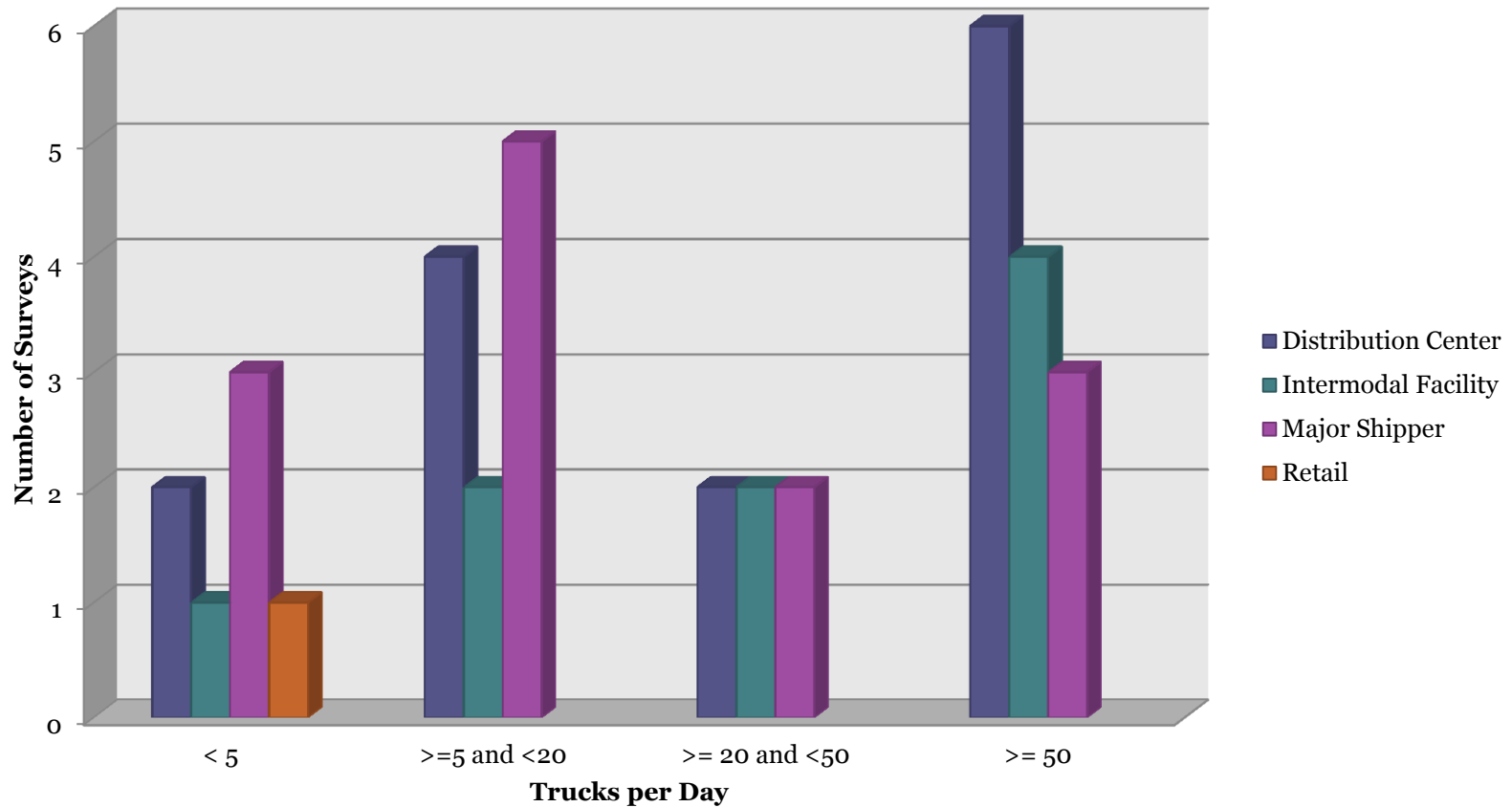
Survey Results -Triad Region

Distribution by Type and Trucks per Day



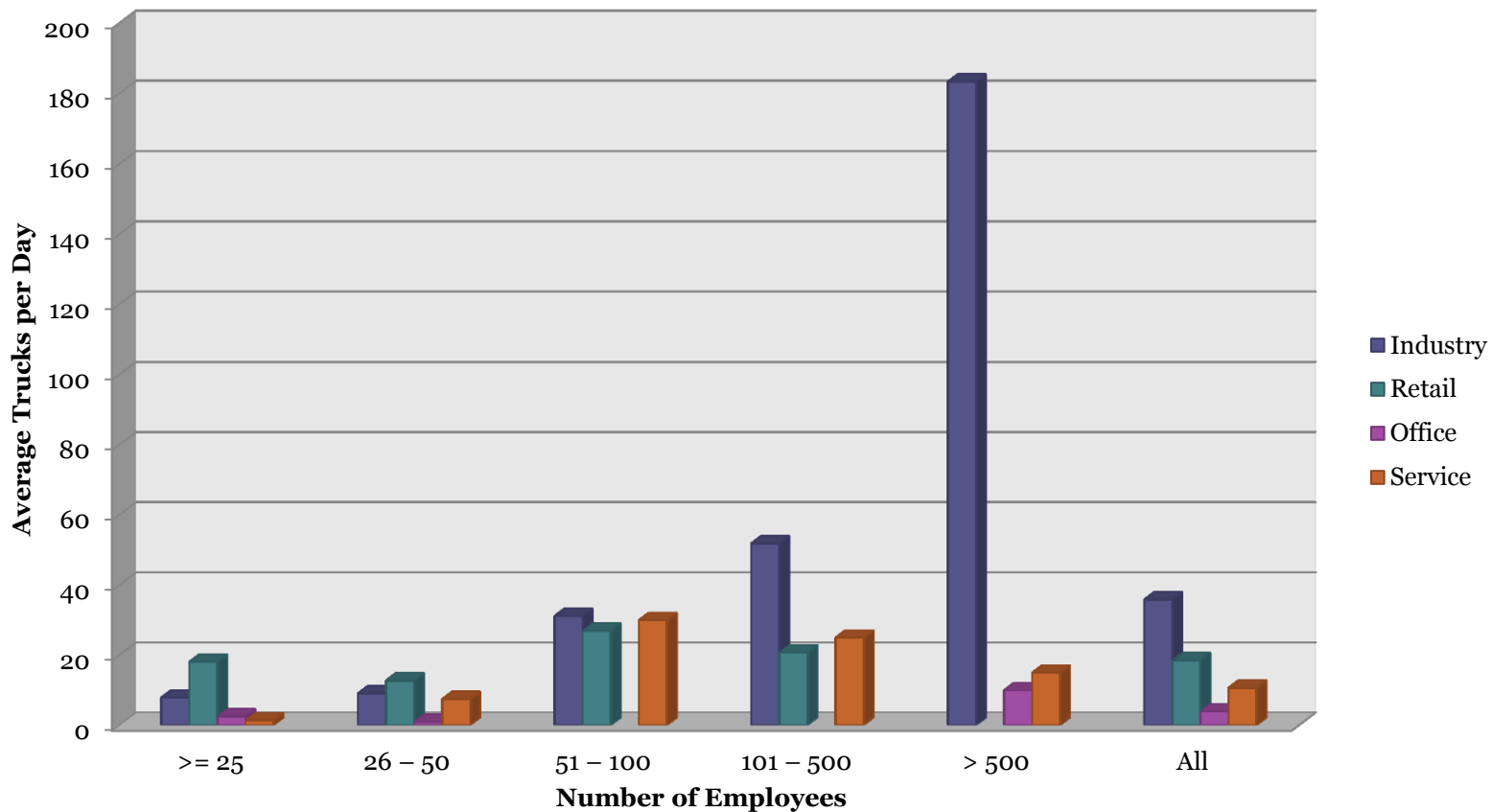
Survey Results - GUAMPO

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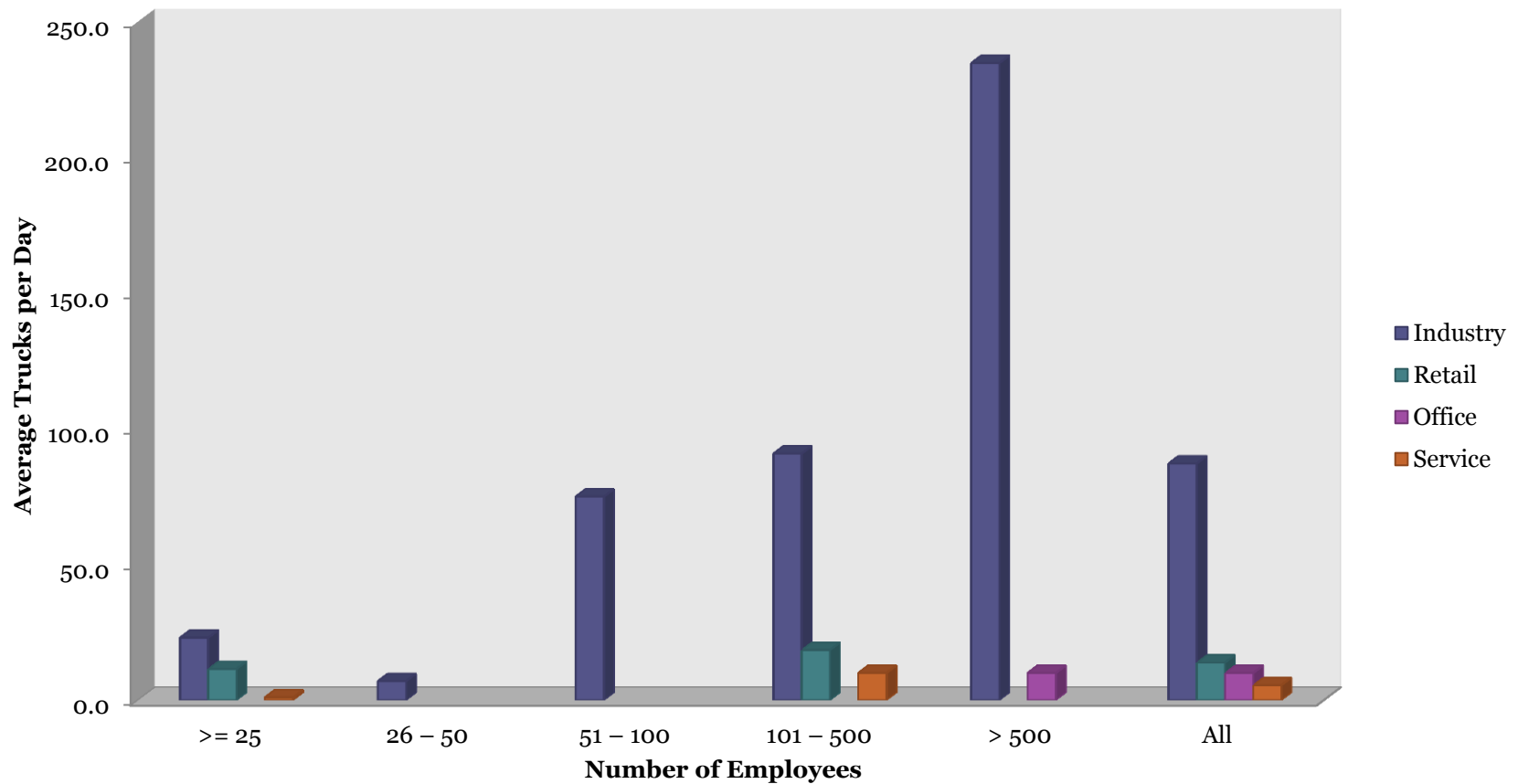
Survey Analysis - Triad Region

Average Trucks/day by type and # of Employees



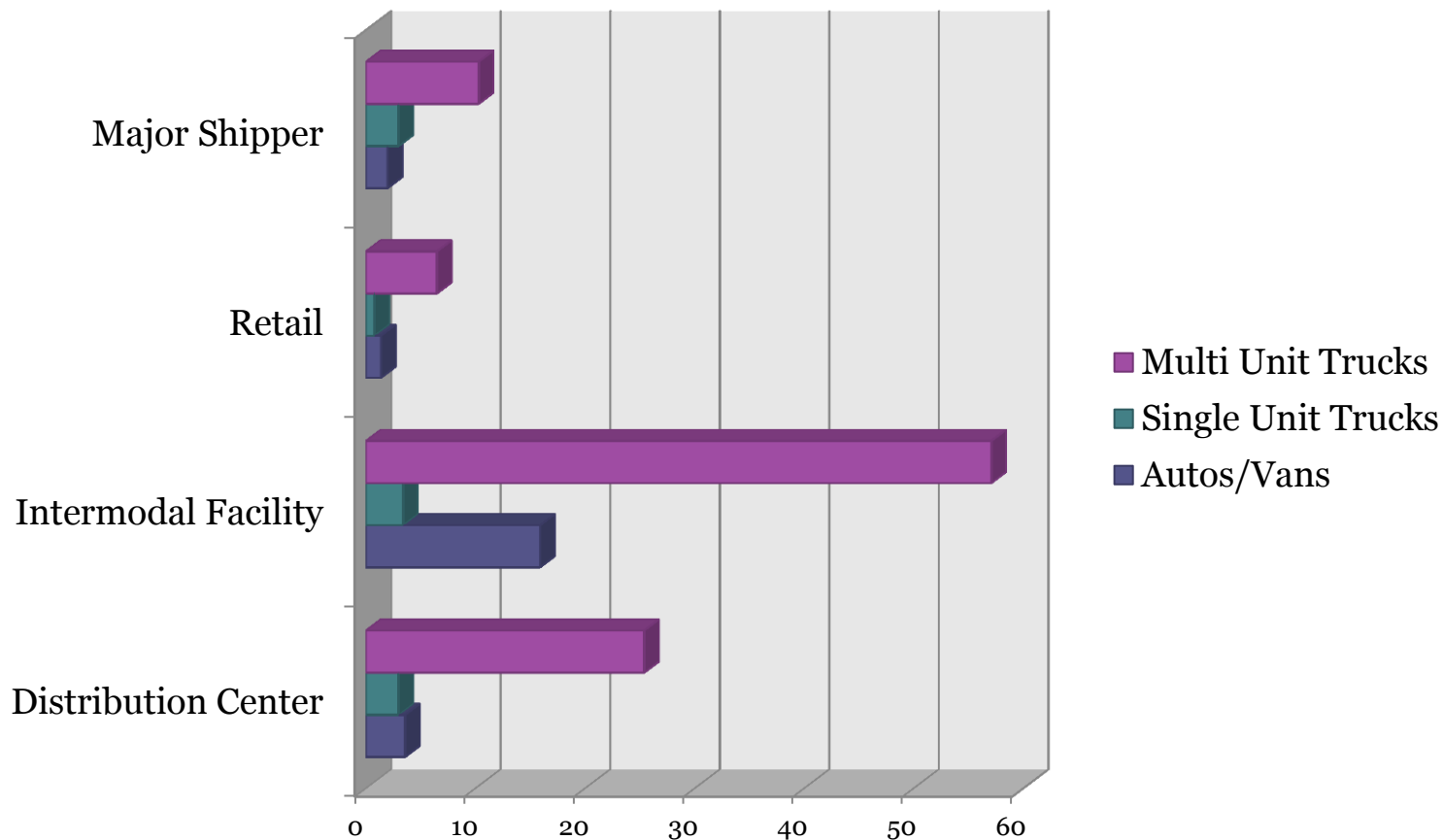
Survey Analysis - GUAMPO

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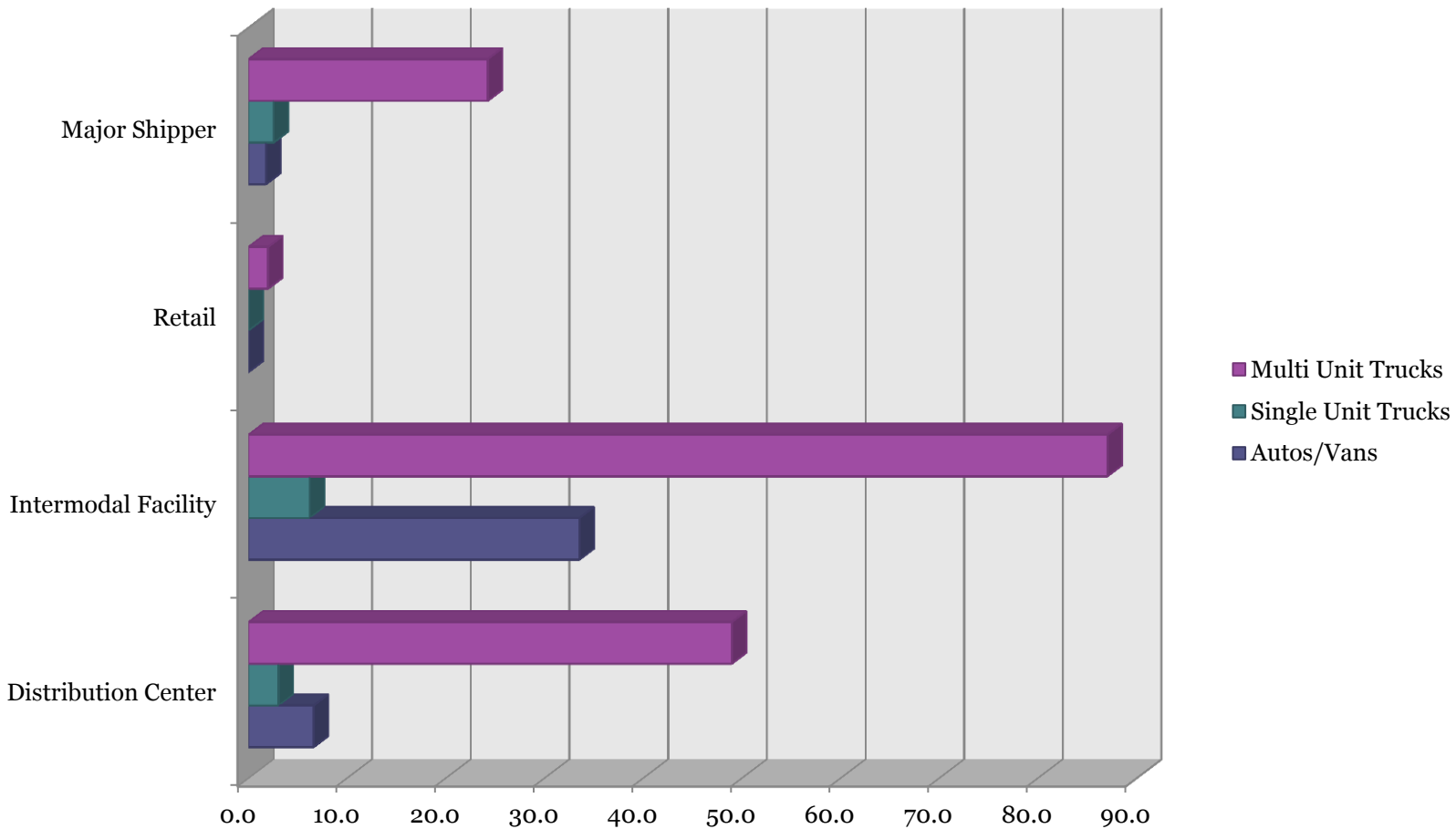
Survey Analysis - Triad Region

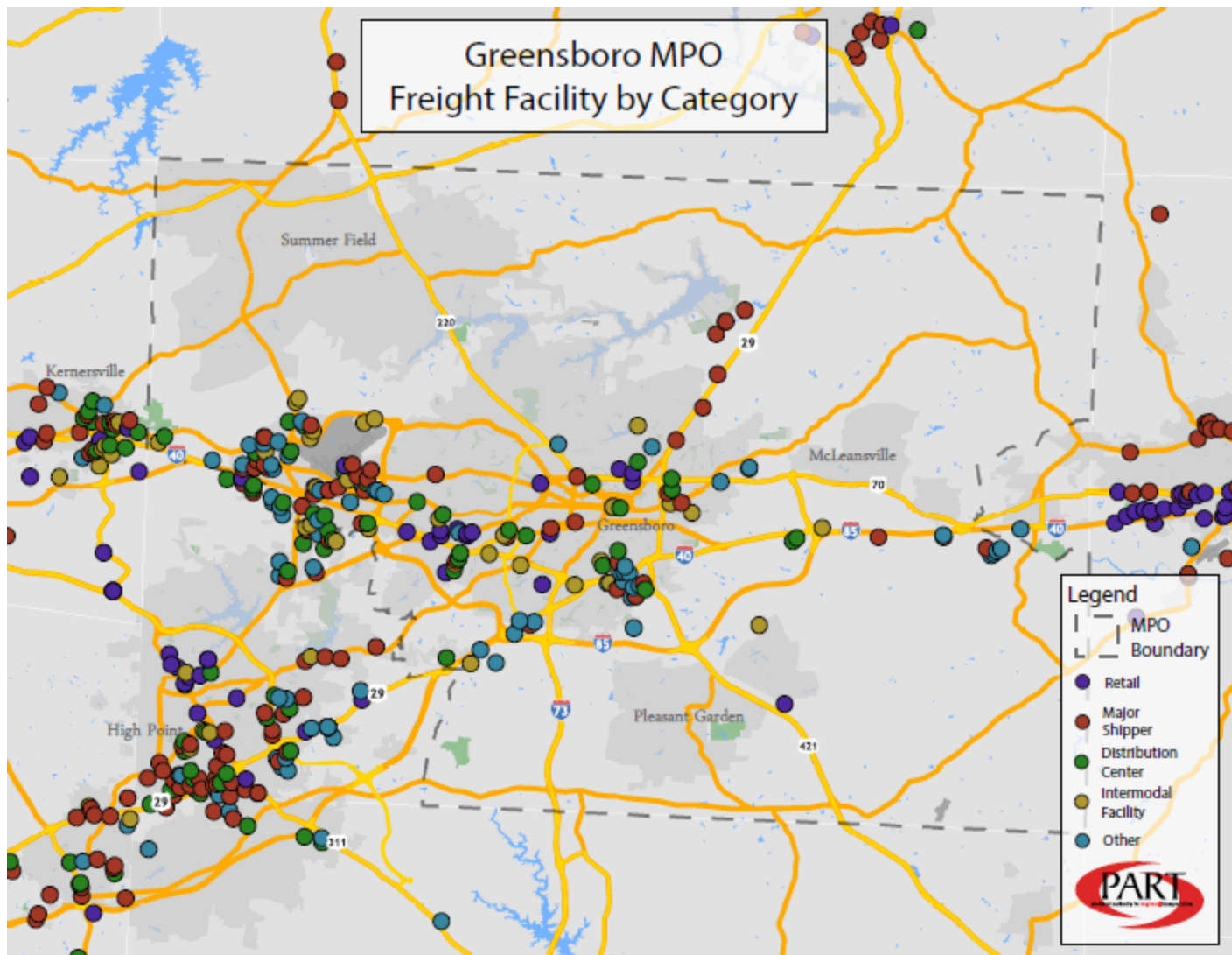
Average Trucks/Day by Classification and Truck Type



Survey Analysis - GMPO

Average Trucks/Day by Classification and Truck Type





Project Findings

Existing Patterns

- Highest concentration of freight facilities in Guilford County followed by Forsyth and Alamance
- By Classification:
 - Major Shipper (~55%)
 - Distribution Centers (~21%)
 - Retail (~16%)
 - Intermodal (~8%) – highest average number of truck trips
- Strong relationships:
 - Building square footage and average truck trips
 - Number of truck bays and average truck trips
- Freight facilities tend to cluster

Long Term Freight Planning

- Increased freight flows as population increases:
 - NC population to increase by 3 million in next 25 years
 - NC freight traffic in 2040 will be 120 million tons higher
- Economic competitiveness:
 - Freight supporting policies
 - Investments in infrastructure
- Triad Freight Study helps address critical freight related questions:
 - Where are the highest concentrations of freight generators
 - What types of vehicles do they use
 - How many trucks visit the site on an average day

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Questions

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